

A hand holding a pen over a laptop keyboard, with various data visualization overlays including bar charts, line graphs, and a world map with percentage callouts (35%, 24%, 8%, 20%).

Integrated Business Reporting Transforms Oil and Gas Company's Data into Actionable Knowledge Plans for Informed, Data-Driven Business Decisions

The Client

The company is the headquarters of an international major oil and gas company in Alaska that is engaged in exploration, production, and development of oil and gas. They are responsible for operating various single and joint ownership oil and gas properties on the North Slope of Alaska that are leased from the state. The operating environment is heavily regulated by the state and federal government with a focus on environmental protection.

The Business Challenge

Timely, reliable, and actionable information is a strategic asset to help organizations improve financial and operational outcomes and overall business performance. The challenge and opportunity is how to transform vast amounts of organizational data into tangible knowledge that leads to informed, data-driven decision-making. The client embraced this opportunity for better data management and transformation with the added objective of ensuring that going forward, business decisions are not only grounded in real-time data, but also improve cost efficiencies. The client identified the need to better manage their organizational data across the different business units.

To address this need, the client engaged CTG to provide consulting leadership and support for creating an enterprise-wide integrated business reporting environment. CTG has a long history of supporting the client on multiple enterprise/business unit projects where CTG provided IT consulting, business process re-engineering, strategic planning, software selection, project management, software development, and application management and support.

The CTG Solution

As with prior client engagements successfully completed by CTG, this project required a business performance-focused IT approach to achieve financial and operational goals. The CTG team embarked on the project with the clear objective of using industry-best big data and analytics practices and our Data Management solution to build an integrated business reporting environment that:

- Connects data from disparate source systems
- Makes actionable information available as a standard set of integrated business reports and dashboards

In discussions with the client's Financial Operations Manager, CTG consultants recommended to adopt enterprise information management (EIM) technology, processes, and tools, which would provide the client with a scalable IT platform for implementing the integrated business reporting environment. The resulting KPI reports and executive dashboards will present on-demand business information at any level, function, asset, or department to help the client make informed, intelligent business decisions. By transforming data and information into knowledge plans that drive profitable business actions, the client would have a clear roadmap on what they should do next given what has happened so far.

CTG's team consisted of experienced data and business process mapping specialists, data warehousing subject matter experts, a senior technical architect, Business Objects universe and reporting domain experts, and a senior Data Management project manager who helped to ensure that the client's EIM project addressed all of their technical requirements, business processes, and governance related to implementing an integrated business reporting environment.

CTG provided the client's desired integrated business reporting environment by employing best practices within the following EIM disciplines:

- **Information Governance Oversight** – Executive sponsorship, alignment with strategic initiatives, stakeholder engagement, and center of excellence (COE) guidance
- **Data Governance** – Roles and responsibilities, workflows
- **Master Data Management** – MDM approach (operational vs. analytic) and architecture (repository, registry, or hybrid)
- **Data Architecture** – Incorporation of disparate data sources into data conformance and analytic data repositories, integration with an existing data warehouse, and plans for incorporation of unstructured data
- **Metadata Management** – Access to enterprise metadata (e.g., data definitions and business rules), and options for full impact analysis and data lineage reporting
- **Data Acquisition and Distribution** – Options for acquiring data from multiple data sources (push vs. pull), and options for leveraging existing and new ETL capabilities
- **Business Intelligence** – Options for advanced analytics (e.g., data mining, predictive modelling, benchmarking, risk stratification)

As business modelling is key to the success of data integration, efficient report delivery, and testing, CTG took nine months to model the financial, worker identity management, labor distribution, HR organization, and employee data masters, resulting in the delivery of a proven integrated business data model that mirrors the business processes and procedures and sets the foundation for delivery of the following key business requirements:

- Powerful presentation tools, where business units can set their own KPIs.
- Proven data integrity assurance, transparency, efficiency, and effectiveness
- A scalable solution that adheres to the client's IT architecture standards.
- A transportable solution for providing Information Management that is not dependent upon specific IT solutions or applications.
- A standard report library, distribution strategies, governance oversight, and role-based security.

CTG further delivered a suite of standard reports and dashboard views as self-service for the client's managers and end users. The dashboards and reports are delivered to SharePoint using Business Objects standard queries. These are designed to address the most requested business queries as well as allow for further research and drill-down within Business Objects directly. Distribution of the detailed standard reports occurs daily for transactional review by the client's budget responsible owners, financial analysts, and functional business leaders.

The Results

CTG's strategic approach to creating the integrated business reporting environment and timely delivery to client's specific business requirements resulted in an EIM solution that provided the following universal business benefits to the client in support of its data-driven decision-making initiative:

- Reduced the required number of financial analysts due to the efficiency of integrated business reporting.
- Introduced the use of real-time, data-driven information in meetings and presentations.
- Provided all business function users and budget owners with access to cost transparency down to the details – automated daily.

- Facilitated timely decision-making with financial and operational insight gained from the integrated data reporting environment.
- Provided secure, web-based access to key reports with flexible layouts, drill-down capabilities, and streamlined report generation process through a single unified reporting solution.
- Provided a consistent look and structure to business information, reducing the barriers that people view information through.
- Delivered a reporting mechanism for self-service business intelligence that anticipates rather than reacts to business signals.
- Delivered clear accountabilities with access to transparent integrated data.

CTG's solution further provided the following intrinsic business benefits:

- Data owners were identified.
- Integrated master data keys were identified and validated.
- Standardized data definitions and descriptions were developed.
- Business data model is now understandable by the business.
- Business model was built to be agnostic to applications and systems containing the data.
- Business model is easily adaptable to changes in any data structures.
- Business model confirms root cause analysis results in solving business problems.
- Business model drives integrity into master root data.
- Business data model assures data is integrated properly for ad hoc reporting.
- Each dimension of the business data model is visually mapped for hierarchy and grouping requirements.
- Master data used for key integration processes is monitored daily.
- Integrity of data is monitored by hundreds of users.

CTG's approach to establishing and managing business information roles and permissions by using the client's active directory and defined folder owners in a progressive manner, assures the client of a sustainable and efficient methodology for maintaining secure user access to business information now and for the future.

CTG's contribution to the success of this engagement was echoed by the client's Financial Operations Manager, who stated that "The implemented Integrated Business Reporting system allows for inconceivable quantities of data to reveal insights after business modeling is applied to disparate data sets for business insight, enabling people to do their best work, driving data to insight, and enabling greater job satisfaction as people find ways to make a difference for business performance that they can impact."

Cost transparency is now available to users because data structures from actual cost data are integrated to other key business data. Users can see and manage the drivers and trends in their business area before the month end financial close.

For example, a Regional President can see entire region costs, Functional Leaders can see aggregated costs for their function, and Budget Owners can see all costs charged to their budgets. Financial and business data is now integrated and aggregated, so costs can be rolled up to function, asset, and facility levels.

The groundwork for integrating disparate data and databases and having business logic applied has set the stage for real informational breakthroughs. The transformative nature of these changes involves much more than just serving up data to be mined, it starts transforming data into business information that can be used for informed decision making.

IN THEIR WORDS...

*"The implemented Integrated Business Reporting system allows for inconceivable quantities of data to reveal insights after business modeling is applied to disparate data sets for business insight, enabling people to do their best work, driving data to insight, and enabling greater job satisfaction as people find ways to make a difference for business performance that they can impact."
– Financial Operations Manager*

*"You've handed us a silver bullet just in time!"
– Projects Organization*

*"Our efficiencies have been built off the integrity of the data the integrated business reporting has given us."
– Wells Organization*

*"I have answers to questions that I haven't even thought to ask yet."
– Operations Organization*

IN THEIR WORDS...

“Organizations succeed with analytics only when good data and insightful models are put to regular and productive use by business people in their decisions and work. We don’t declare victory when a great model or application is developed—only when it’s being used to improve business performance and create new value.”

– Financial Operations Manager

Further, this data and information framework provides the opportunity to use new graphical data visualization and analytics tools, positioning the business to embrace and leverage Big Data where data mashups and blending are being done. It has established one undisputed source of data, giving all decision makers feedback in near real-time, and it provides all users with the ability to make sense of data and translate this new knowledge and information into bottom-line improvements.

The client’s financial manager further noted that, “Organizations succeed with analytics only when good data and insightful models are put to regular and productive use by business people in their decisions and work. We don’t declare victory when a great model or application is developed—only when it’s being used to improve business performance and create new value.”



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CTG is a leading provider of digital transformation solutions and services that accelerate clients’ project momentum and achievement of their desired IT and business outcomes. We’ve earned a reputation as a reliable, results-driven partner focused on improved data-driven decision-making, meaningful business performance improvements, new and enhanced customer experiences, and continuous innovation. CTG has operations in North America, South America, Western Europe, and India.